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## A cross-jurisdictional evaluation of insurance coverage among HIV care patients following the Affordable Care Act

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### ABSTRACT

The impact of the Affordable Care Act (ACA) on HIV care patients, aged 18–64, was evaluated in three jurisdictions with Medicaid expansion (Chicago, New York State, and Washington) and three jurisdictions without Medicaid expansion (Georgia, Texas, and Virginia) using data from the Medical Monitoring Project. Multivariate regression models were used to evaluate insurance status that was reported pre- and post-ACA; self-reported impact of ACA on HIV care was explored with descriptive statistics. The likelihood of having insurance was significantly greater post-ACA compared to pre-ACA in Chicago (aRR = 1.33, 95%CI = 1.20, 1.47), Washington (aRR = 1.15, 95%CI = 1.08, 1.22), and Virginia (aRR = 1.14, 95%CI = 1.00, 1.29). In Washington and Chicago, the likelihood of being Medicaid-insured was greater post-ACA compared to pre-ACA implementation (Chicago: aRR = 1.25, 95%CI = 1.03, 1.53; Washington: aRR = 1.66, 95% CI = 1.30, 2.13). No other significant differences were observed. Only a subset of HIV care patients (range: 15–35%) reported a change in insurance that would have coincided with the implementation of ACA; and within this subset, a change in medical care costs was the most commonly noted issue. In conclusion, the influence of ACA on insurance coverage and other factors affecting HIV care likely varies by jurisdiction.

### ARTICLE HISTORY

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### KEYWORDS

HIV/AIDS; health reform;  
Ryan White; insurance  
coverage

### Background

The Affordable Care Act (ACA) was established in 2010 to improve the quality, accessibility, and cost of health care in the United States and was largely put into effect by 1 January 2014 (Kaiser Family Foundation, 2013). The following provisions were anticipated to directly impact HIV care patients: (1) elimination of pre-existing condition coverage exclusions, (2) provision of tax credits and subsidies to purchase insurance through marketplace exchanges, (3) expansion of Medicaid eligibility to 138% of the federal poverty level (FPL), (4) policy changes that should reduce out-of-pocket costs for Medicare beneficiaries, and (5) additional AIDS Drug Assistance Program support for wrap-around services (Centers for Disease Control and Prevention [CDC], 2015; Kaiser Family Foundation, 2013). Medicaid expansion, however, was adopted by only 31 states (Kaiser Family Foundation, 2015).

Prior to the ACA, it was estimated that 17% of HIV care patients were uninsured, the majority of whom received Ryan White assistance to cover HIV care-

related costs (Kates et al., 2014). Following ACA, the HIV care payer source for many low-income patients would need to shift from Ryan White to Medicaid or private insurance plans. The shift from an HIV-specific payer source to a non-HIV-specific payer source raised concerns that some patients may experience a disruption in care, the need to change HIV care providers, an increase in out-of-pocket costs, or a lapse in coverage of some ART regimens (Abara & Heiman, 2014; Hazelton et al., 2014; Pickert, 2013).

In light of speculation about how the ACA would affect HIV care patients, we compared insurance coverage in a sample of HIV care patients who participated in the Medical Monitoring Project (MMP) before ACA implementation to a sample that participated in MMP following ACA implementation, and examined how the latter sample described recent changes to their care in the post-ACA era. We contrasted HIV care patients' experiences across six jurisdictions: three jurisdictions without Medicaid expansion (Georgia, Texas, and Virginia), two jurisdictions that expanded Medicaid

under ACA (Chicago and Washington), and one state that had expanded-Medicaid years before ACA (New York State) (Sommers, Baicker, & Epstein, 2012).

## Methods

MMP uses a three-stage sampling design to obtain annual, cross-sectional samples of adults receiving HIV care representative to the underlying national and sub-national HIV care populations. In this article, we describe data collected in 6 (of 23) MMP jurisdictions that included questions pertaining to the ACA in the local portion of their 2014 MMP questionnaire: Chicago, Georgia, New York State (excluding New York City), Texas (excluding Houston), Virginia, and Washington State. MMP in Houston and New York City is implemented independently from MMP in Texas and New York State; since these cities did not include ACA questions in their 2014 local MMP questionnaires, they were not included in this analysis. We analyzed data from the 2012 and 2014 MMP cycles, collected August 2012 to April 2013 and August 2014 to April 2015, respectively. The sampling frame included all patients who visited an MMP-participating HIV care facility in the first 4 months of 2012 and 2014; participating facilities were non-identical in MMP 2012 and MMP 2014. Since MMP is a public health surveillance activity, it is not subject to human subjects institutional review board (IRB) regulations (CDC, 2010). Nonetheless, New York State, Virginia, and Chicago sought and received IRB approval to conduct MMP at a handful of facilities in their jurisdictions.

This analysis describes self-reported insurance coverage in the 12 months prior to the MMP interview. Analyses were restricted to participants 64 years and younger, as all US residents 65 years and older are eligible for Medicare. Participants in MMP 2014 were asked if their insurance coverage had changed in the prior 12 months. Participants answering affirmatively were then asked whether there was a change in the amount spent on medical care, HIV care source, quality of HIV care, and access to supportive services.

We used two multivariate Poisson regression models to estimate the relative risk of two outcomes: possession of any health insurance (public and/or private) and possession of Medicaid (specifically), given participation in MMP pre- or post-ACA implementation. Models were adjusted for age, race, sex, education level, nativity, and household income. All analyses were unweighted, as sampling weights are not currently available for the 2014 MMP cycle.

## Results

Four hundred HIV care patients were sampled from each jurisdiction, except New York State, which had a sample of 200 patients. In total, 1236 HIV care patients sampled from 131 facilities in MMP 2012 and 1251 patients sampled from 126 facilities in MMP 2014 were included in this analysis (response rate: 50–59% across jurisdictions in MMP2012/2014).

### Sample description

The demographic characteristics of participants in the 2014 MMP cycle varied across the six jurisdictions (Table 1). The median age was between 46 and 49 years. The proportion male ranged from 57% in New York State to 86% in Washington State. Non-Hispanic Blacks composed more than half the MMP sample in Chicago, Georgia, and Virginia and less than half of the other jurisdictions' samples. Whereas 39% of the Texas sample was Hispanic, this proportion ranged from 4% to 19% in the other jurisdictions. The percent foreign-born ranged from 7% in Georgia to 22% in Texas. The percent below the FPL ranged from 39% in Washington State to 56% in Virginia.

### Health insurance coverage pre- and post-ACA

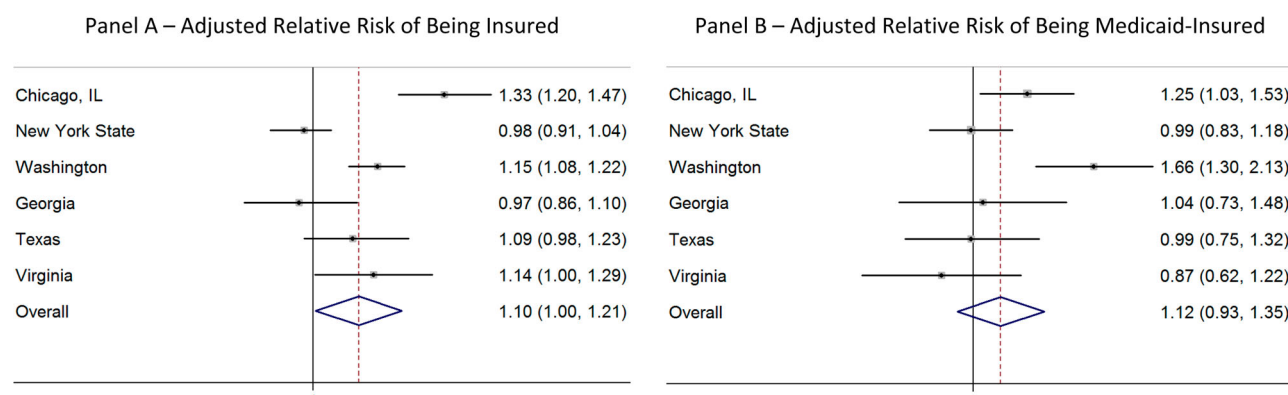
In adjusted analyses that controlled for demographic differences between the two MMP cycles, the likelihood of having insurance was significantly greater post-ACA

**Table 1.** Description of HIV care patients participating in the MMP in 2014–2015 in six US jurisdictions.

	Chicago, IL <sup>a</sup>	New York State <sup>a</sup>	Washington	Georgia	Texas <sup>a</sup>	Virginia
Age, Median (IQR)	46 (38, 55)	49 (40, 56)	49 (42, 55)	47 (37, 53)	46 (36, 53)	49 (39, 55)
Male	77%	57%	86%	74%	78%	69%
Race/ethnicity						
White, non-Hispanic	24%	38%	57%	17%	23%	27%
Black, non-Hispanic	55%	32%	19%	75%	36%	56%
Hispanic	16%	19%	15%	4%	39%	12%
Other	4%	11%	9%	5%	2%	6%
>High School Diploma	55%	42%	66%	51%	54%	45%
Foreign born	16%	14%	19%	7%	22%	18%
At or Below FPL	50%	55%	39%	48%	50%	56%

Note: IQR = interquartile range, FPL = federal poverty level.

<sup>a</sup>Chicago (excluding rest of Illinois), New York (excluding New York City), and Texas (excluding Houston).



**Figure 1.** Adjusted likelihood of being insured (Panel A) and Medicaid-insured (Panel B) in 2014 compared to MMP 2012, restricted to respondents under 65 years, stratified by jurisdiction.

Notes: Estimates are adjusted for age, sex, race, nativity status, income level, and education level. Data from New York City and Houston are not represented in the figures.

compared to pre-ACA in Chicago, Washington, and Virginia (Figure 1, Panel A). In Washington and Chicago, the likelihood of having Medicaid (specifically) was greater post-ACA compared to pre-ACA implementation; this association was not observed elsewhere (Figure 1, Panel B).

### Changes affecting HIV care

In the period following ACA, 15–35% of respondents reported a recent change in health insurance, and 1–8% reported that both their insurance and their HIV care source had changed in the prior 12 months (Figure 2, Panel A). Among participants with an insurance change, the majority indicated that their HIV care quality and access to supportive services were “about the same” following the insurance change (Figure 2, Panel B). More respondents noted a change in care costs, with 42% and 50% of respondents in Georgia and Texas, respectively, reporting that the cost of care had increased following the insurance change (Figure 2, Panel C).

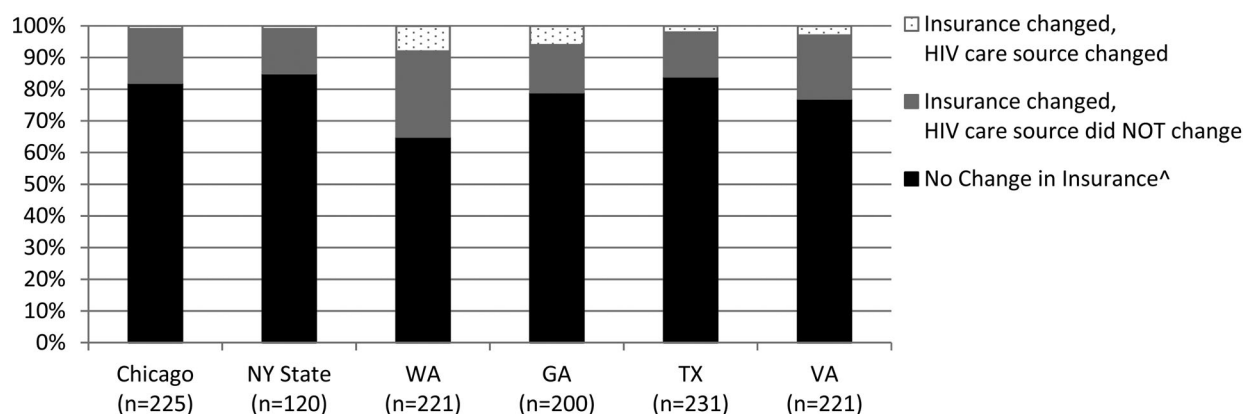
### Discussion

This analysis illustrates the cross-jurisdictional heterogeneity of insurance coverage held by HIV care patients. The likelihood of being insured and being Medicaid-insured was significantly greater following the establishment of ACA among MMP participants in Chicago and Washington – jurisdictions that had expanded Medicaid under ACA. In New York, where an expanded-Medicaid program and a subsidized private insurance program had been operating long before ACA, insurance coverage was high pre-ACA and remained high post-ACA, likely accounting for the null association between ACA era and insurance coverage. In Virginia, a non-Medicaid-

expanding jurisdiction, the likelihood of being insured was moderately, but nonetheless significantly, greater post-ACA, though no difference was observed in the likelihood of being Medicaid-insured. In Georgia and Texas, two non-Medicaid-expanding jurisdictions, the likelihood of being insured or Medicaid-insured did not significantly differ pre/post-ACA implementation.

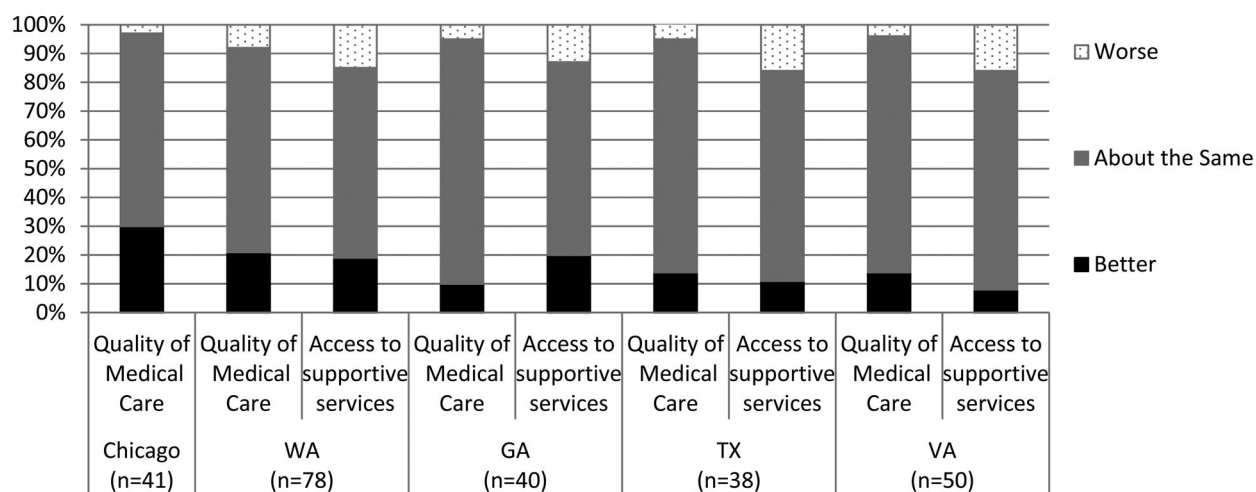
In the era following ACA implementation, only 15–35% of patients reported a recent change in insurance coverage, and those whose coverage changed typically reported that their HIV care source, quality of medical care, and access to supportive services stayed “about the same”. This finding was unexpected, given speculation that HIV care would be transformed by the ACA (Abara & Heiman, 2014; Hazelton et al., 2014; Pickert, 2013). Patients reporting a change in insurance more frequently noted a change in care cost, an issue that deserves greater attention, especially with regard to insurance purchased on the exchange.

There are limitations to this analysis. We tried to minimize the influence of confounding relating to differences in MMP sample composition through reporting results that controlled for key demographic characteristics; however, residual confounding may still exist. Reliance upon self-reported measures might have introduced misclassification bias. The external validity of our analysis is limited by the following: (1) our analysis did not account for non-response bias and probability of selection, as weights for MMP 2014 have not yet been released; (2) results corresponding to New York State and Texas do not reflect the experiences of patients residing in New York City and Houston; and (3) the MMP sampling frame excludes HIV-infected people not engaged in HIV care. There are limitations specific to Figure 2: (1) participants were asked about changes in insurance coverage or HIV care 7–16 months after ACA was implemented, possibly too



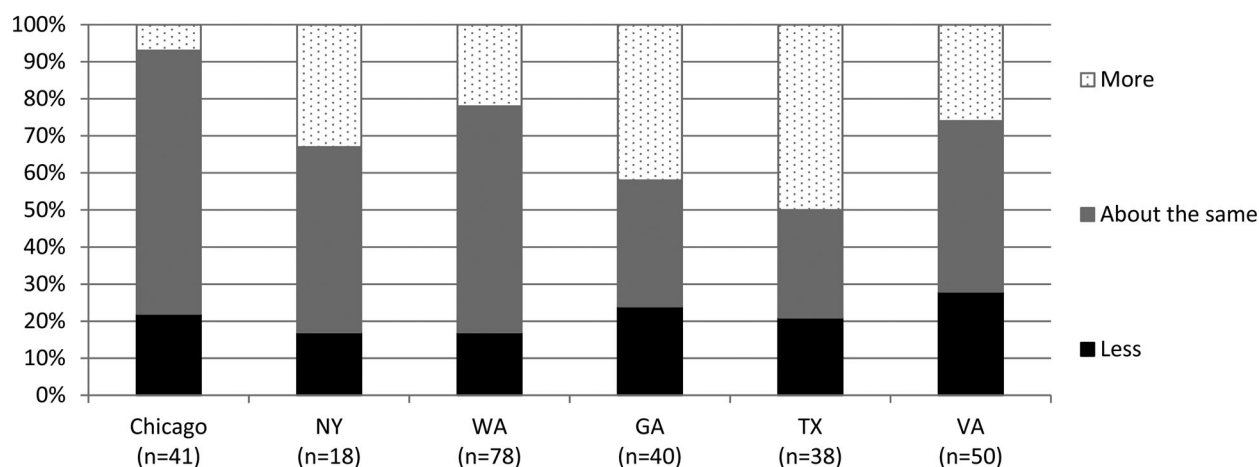
**Panel A: Reported Change in Insurance Coverage and/or HIV Care Source**

^Participants without a change in insurance were not asked if their HIV care source had changed.



**Panel B: Reported Change in Quality of Medical Care and Access to Supportive Services among Participants who Reported a Change in Insurance Coverage**

New York and Chicago did not ask about change in access to supportive services; New York did not ask about change in quality in care.



**Panel C: Reported Change in Cost of Medical Care among Participants who Reported a Change in Insurance Coverage**

**Figure 2.** Reported changes affecting HIV care among HIV care patients who participated in MMP between August 2014 and May 2015 in six jurisdictions.



short a period to notice any change and (2) perceptions of recent change in coverage/care were not assessed pre-ACA implementation. Finally, the insufficient number of non-citizens included in our evaluation made it impossible to assess insurance status among non-naturalized immigrants with HIV.

The strengths of our analysis should not be overlooked. MMP participants receive care in a number of HIV care settings with coverage from a diverse set of payers, and may thus be more representative of the US HIV care population than other available data systems. By comparing heterogeneous samples of HIV care patients in six jurisdictions, we were able to explore how the mix of HIV care payer sources can vary by jurisdiction and how this mix might have been affected by the ACA and decisions about Medicaid expansion. Unexpectedly, only a small subset of patients in the post-ACA era reported that their insurance and care had changed. Some participants perceived an increase in care costs. Given the heterogeneity of our findings, we recommend that evaluations of the ACA and insurance coverage among people with HIV be conducted at sub-national levels.

### Disclosure statement

No potential conflict of interest was reported by the authors.

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